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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/543,045	07/21/2005	Jeffrey Allen Cooper	PU030321	3888
24498 7590 03/02/2010 Robert D. Shedd, Patent Operations THOMSON Licensing LLC P.O. Box 5312 Princeton, NJ 08543-5312				
EXAMINER				
HOLDER, ANNER N				
ART UNIT		PAPER NUMBER		
2621				
MAIL DATE		DELIVERY MODE		
03/02/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/543,045

**Applicant(s)**

COOPER ET AL.

**Examiner**

ANNER HOLDER

**Art Unit**

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 July 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-32 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 21 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SI/226)  
Paper No(s)/Mail Date See Continuation Sheet  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

Continuation of Attachment(s) 3. Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :12/07/09; 12/07/09; 08/08/08; 03/26/07; 10/30/06; 007/21/05.

## DETAILED ACTION

### ***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-5, 8-17, 19, 24, 29, and 32 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-16, 19, 24, and 27 of copending Application No. 10/542972. Although the conflicting

claims are not identical, they are not patentably distinct from each other because they substantially claim the same scope of the invention. See comparison below.

Co-pending 10/542972	Application	1-5	6-15	16	19	24	27
Present 10/543045	Application	1-5	8-17	19	24	29	32

3. Claim 1 of the present application 10/543045 corresponds with claim 1 of co-pending application 10/542972

Claim 2 of the copending corresponds with claim 2 of the present application.

Claim 3 of the copending corresponds with claim 3 of the present application.

Claim 4 of the copending corresponds with claim 4 of the present application.

Claim 5 of the copending corresponds with claim 5 of the present application.

Claim 6 of the copending corresponds with claim 8 of the present application.

Claim 7 of the copending corresponds with claim 9 of the present application.

Claim 8 of the copending corresponds with claim 10 of the present application.

Claim 9 of the copending corresponds with claim 11 of the present application.

Claim 10 of the copending corresponds with claim 12 of the present application.

Claim 11 of the copending corresponds with claim 13 of the present application.

Claim 12 of the copending corresponds with claim 14 of the present application.

Claim 13 of the copending corresponds with claim 15 of the present application.

Claim 14 of the copending corresponds with claim 16 of the present application.

Claim 15 of the copending corresponds with claim 17 of the present application.

Claim 16 of the copending corresponds with claim 19 of the present application.

Claim 19 of the copending corresponds with claim 24 of the present application.

Claim 24 of the copending corresponds with claim 29 of the present application.

Claim 27 of the copending corresponds with claim 32 of the present application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set for the in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5, 8-11, 12, 17-21, and 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsushima et al. US 6,535,717 in view of Yun US 6,700,624.

6. As to claim 1, Matsushima teaches a method for staggercasted content, [abstract; figs. 3-5; col. 8 lines 31-40] comprising the steps of: encoding a set of signals representing content, [fig. 3; fig. 5 (5a, 5b); col. 9 lines 5-14, 42-50] the set capable of being decoded to produce a corresponding set of decoded signals, [fig. 6 (15a, 15b); col. 10 lines 32-40, 53-65] each decoded signal having a quality different from the qualities of the decoded signals corresponding to the other encoded signals; [fig. 6 (15a, 15b); col. 10 lines 32-40, col. 10 lines 13-20 - modulated signal is up converted and amplified; col. 11 lines 18-25 - signal is down converted and demodulated; col. 10 lines 53 - col. 11 lines 6; the signals represent differing qualities being high quality signals

and low quality signals] generating a composite signal comprising the set of encoded signals staggered in time; [abstract; fig. 3; fig. 5; col. 8 line 56 - col. 9 line 19 (emphasis col. 9 lines 9-14 - the delay staggers the signals in time)] extracting the set of encoded signals from the composite signal; [fig. 6; col. 10 lines 46-65 (emphasis lines 50-52)] detecting errors in the set of extracted encoded signals to produce a subset of available extracted encoded signals which are not erroneous; [fig. 6; col. 10 lines 46-65; col. 11 lines 36-60] decoding a content representative signal at a selectable desired quality. [abstract; fig. 6 (15a, 15b); col. 10 lines 32-40, 46-65; col. 11 lines 36-60]

Matsushima does not explicitly teach storing the decoded content representative signal in a storage device.

Yun discloses storing the decoded content representative signal in a storage device. [fig. 7 (600 and 600-1); col. 5 lines 42-60; - it is well known in the art that a frame buffer is a video output device that drives a video display from a memory buffer containing a complete frame of data. Therefore, it is well known in the art that a frame buffer is a required component of the decoder for displaying of video data.]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Yun with the device of Matsushima allowing for viewer selection of preferred viewing quality of transmitted video.

7. As to claim 2, Matsushima (modified by Yun) teaches wherein if a content representative signal at the desired quality is not available, decoding a content representative signal at a selectable desired quality from the subset of available extracted encoded signals and storing the decoded content representative signal.

[Matsushima - col. 10 line 53 - col. 11 line 6; Yun - fig. 7 (600 and 600-1); col. 5 lines 42-60; - it is well known in the art that a frame buffer is a video output device that drives a video display from a memory buffer containing a complete frame of data. Therefore, it is well known in the art that a frame buffer is a required component of the decoder for displaying of video data]

8. As to claim 3, Matsushima (modified by Yun) teaches wherein the decoding step comprises the step of selecting the content representative signal at the desired quality automatically. [Matsushima - col. 10 line 53 - col. 11 line 6]

9. As to claim 4, Matsushima (modified by Yun) teaches wherein the step of selecting the desired quality automatically comprises the step of selecting the desired quality in response to preset selection parameters. [Matsushima - col. 10 line 53 - col. 11 line 6 - the present modes represents the selection parameter]

10. As to claim 5, Matsushima (modified by Yun) teaches wherein the parameters are preset in response to user input. [Yun - abstract; col. 7 lines 41-65; col. 8 lines 40-48, 55-62; col. 9 line 54 - col. 10 line 7]

11. As to claim 8, Matsushima (modified by Yun) teaches wherein the decoding step comprises the step of selecting the desired quality in response to user input. [Yun - abstract; col. 8 lines 40-48, 55-62; col. 9 line 54 - col. 10 line 7]

12. As to claim 9, Matsushima (modified by Yun) teaches the step of selecting the desired quality in response to user input comprises the steps of: displaying an image representing information related to the encoded set of signals; [Yun - abstract; col. 3 lines 26-54; col. 4 lines 2-8, 30-44; fig. 11; col. 10 lines 8-16] and receiving user input



after displaying the information display. [Yun - fig. 11; fig. 13; abstract; col. 7 lines 41-56; col. 8 lines 5-27, 40-48, 55-62; col. 9 lines 17-50; col. 9 line 54 - col. 10 line 7]

13. As to claim 10, Matsushima (modified by Yun) teaches the content representative signal represents a television program; [Matsushima - fig. 3; fig. 5 (5a, 5b); col. 9 lines 5-14, 42-50; Yun - abstract; col. 3 lines 26-54; col. 4 lines 2-8, 30-44; fig. 11; col. 10 lines 8-16] the step of generating a composite signal [Matsushima - abstract; figs. 3-5; col. 8 lines 31-40] comprises the step of further including a signal carrying information related to the television program comprising the respective qualities of the set of encoded content representative signal; [Yun - abstract; col. 3 lines 26-54; col. 4 lines 2-8, 30-44; fig. 11; col. 10 lines 8-16] and the step of displaying an image of the encoded signal representative information comprises listing the information related to the television program and the qualities of the set of encoded signals. [Yun - fig. 11; fig. 13; abstract; col. 7 lines 41-56; col. 8 lines 5-27, 40-48, 55-62; col. 9 lines 17-50; col. 9 line 54 - col. 10 line 7]

14. As to claim 11, Matsushima (modified by Yun) wherein the television program information carrying signal carries data representing either or both of a program map table (PMT) and a program and information systems protocol-virtual channel table (PSIP-VCT). [Yun - col. 6 line 61-65; col. 8 line 55 - col. 9 line 12; col. 9 line 28 - PMT is contained with the PSIP]

15. As to claim 12, Matsushima (modified by Yun) wherein the composite signal generating step comprises generating the set of encoded signals such that a lowest quality decoded signal is undelayed, [fig. 5 (1, 2, 5b); col. 9 lines 1-19] and the other

encoded signals are delayed with respect to the encoded signal corresponding to the lowest quality decoded signal such that the higher the quality of the corresponding decoded signal, the longer the delay period. [fig. 5 (1 and 4); fig. 7 (1 and 4); col. 9 lines 5-19]

16. As to claim 17, Matsushima A staggercasting receiver, for receiving a composite signal [abstract; figs. 3-5; col. 8 lines 31-40] comprising a set of encoded signals, staggered in time, representing content, [fig. 3; fig. 5 (5a, 5b); col. 9 lines 5-14, 42-50] the set capable of being decoded to produce a corresponding set of decoded signals, [fig. 6 (15a, 15b); col. 10 lines 32-40, 53-65] each decoded signal having a quality different from the qualities of the decoded signals corresponding to the other encoded signals, [fig. 6 (15a, 15b); col. 10 lines 32-40, col. 10 lines 13-20 - modulated signal is up converted and amplified; col. 11 lines 18-25 - signal is down converted and demodulated; col. 10 lines 53 - col. 11 lines 6; the signals represent differing qualities being high quality signals and low quality signals] the receiver comprising: a demultiplexer, responsive to the composite signal, for extracting the set of encoded signals, [fig. 6; col. 10 lines 46-65 (emphasis lines 50-52)] detecting errors in respective encoded signals, and producing a subset of available extracted signals which are not erroneous; [fig. 6; col. 10 lines 46-65; col. 11 lines 36-60] a decoder, [fig. 5 (15a and 15b); fig. 7 (15a and 15b)] coupled to the demultiplexer [fig. 6 (14)] and responsive to the error representative signal, for reproducing a content representative signal at a selectable desired quality. [abstract; fig. 6 (15a, 15b); col. 10 lines 32-40, 46-65; col. 11 lines 36-60]

Matsushima does not explicitly teach a storage device, coupled to the decoder, for storing the reproduced content representative signal.

Yun discloses a storage device, coupled to the decoder, for storing the reproduced content representative signal. [fig. 7 (600 and 600-1); col. 5 lines 42-60; - it is well known in the art that a frame buffer is a video output device that drives a video display from a memory buffer containing a complete frame of data. Therefore, it is well known in the art that a frame buffer is a required component of the decoder for displaying of video data.]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Yun with the device of Matsushima allowing for viewer selection of preferred viewing quality of transmitted video.

17. As to claim 18, Matsushima (modified by Yun) teaches wherein the decoder [Matsushima - fig. 5 (15a and 15b); fig. 7 (15a and 15b)] comprises circuitry for reproducing a content representative signal at the highest quality from the subset of available extracted encoded signals. Matsushima - col. 10 line 53 - col. 11 line 6]

18. As to claim 19, Matsushima (modified by Yun) teaches wherein the decoder [Matsushima - fig. 5 (15a and 15b); fig. 7 (15a and 15b)] comprises circuitry for reproducing a content representative signal at a selectable desired quality from the subset of available extracted encoded signals is a content representative signal at the desired quality is not available. [Matsushima - col. 10 line 53 - col. 11 line 6]

19. As to claim 20, Matsushima (modified by Yun) teaches wherein the decoder [Matsushima - fig. 5 (15a and 15b); fig. 7 (15a and 15b)] further comprises circuitry for

automatically reproducing the content representative signal at the desired quality.

[Matsushima - col. 10 line 53 - col. 11 line 6]

20. As to the 21, Matsushima (modified by Yun) teaches wherein the decoder [Matsushima - fig. 5 (15a and 15b); fig. 7 (15a and 15b)] further comprises circuitry for storing preset selection parameters, [Yun - abstract; col. 7 lines 41-65; col. 8 lines 40-48, 55-62; col. 9 line 54 - col. 10 line 7; col. 9 line 17-53] and for automatically reproducing the content representative signal at the desired quality in response to the selection parameters. [Matsushima - col. 10 line 53 - col. 11 line 6]

21. As to claim 24, Matsushima (modified by Yun) teaches wherein further comprises circuitry for storing selection parameters in response to user input. [Yun - abstract; col. 7 lines 41-65; col. 8 lines 40-48, 55-62; col. 9 line 54 - col. 10 line 7]

22. As to claim 25, Matsushima (modified by Yun) teaches wherein the decoder comprises circuitry for reproducing the content representative signal at the desired quality in response to user input. [abstract; col. 7 lines 41-65; col. 8 lines 40-48, 55-62; col. 9 line 54 - col. 10 line 7; col. 9 line 17-53]

23. As to claim 26, Matsushima (modified by Yun) teaches an on-screen-display device for displaying an image representing information related to the encoded set of signals. [Yun - abstract; col. 3 lines 26-54; col. 4 lines 2-8, 30-44; fig. 11; col. 10 lines 8-16]

24. As to claim 27, Matsushima (modified by Yun) teaches wherein the content representative signal is a television program [Matsushima - fig. 3; fig. 5 (5a, 5b); col. 9 lines 5-14, 42-50; Yun - abstract; col. 3 lines 26-54; col. 4 lines 2-8, 30-44; fig. 11; col.

10 lines 8-16] and the composite signal [Matsushima - abstract; figs. 3-5; col. 8 lines 31-40] further comprises a signal carrying information related to the television program comprising the respective qualities of the set of encoded content representative signal; [Yun - abstract; col. 3 lines 26-54; col. 4 lines 2-8, 30-44; fig. 11; col. 10 lines 8-16] and the on-screen-display device displays a listing of the information related to the television program and the qualities of the set of encoded signals. [Yun - fig. 11; fig. 13; abstract; col. 7 lines 41-56; col. 8 lines 5-27, 40-48, 55-62; col. 9 lines 17-50; col. 9 line 54 - col. 10 line 7]

25. As to claim 28, Matsushima (modified by Yun) teaches wherein the television program information carrying signal carries data representing either or both of a program map table (PMT) and a program and information systems protocol-virtual channel table (PSIP-VCT). [Yun - col. 6 line 61-65; col. 8 line 55 - col. 9 line 12; col. 9 line 28 - PMT is contained with the PSIP]

26. Claims 6-7 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsushima et al. US 6,535,717 in view of Yun US 6,700,624 further in view of Logan et al. US 5,371,551.

27. As to claim 6, Matsushima (modified by Yun) teaches the limitations of claim 1.

Matsushima (modified by Yun) does not teach explicitly wherein the step of selecting the desired quality automatically comprises the step of selecting the desired quality in response to the status of the storage device.

Logan teaches wherein the step of selecting the desired quality automatically comprises the step of selecting the desired quality in response to the status of the storage device. [col. 5 line 65 - col. 6 line 3]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Logan with the teachings of Matsushima (modified by Yun) allowing for improved efficiency and storage capacity.

28. As to claim 7, Matsushima (modified by Yun and Logan) teaches wherein if the status of the storage device indicates that the storage device is nearly full, the desired quality is automatically a lower quality. [col. 5 line 65 - col. 6 line 3]

29. As to claim 22, The receiver of claim 17 wherein: the storage device generates a signal representing the status of the storage device; and the decoder comprises circuitry for automatically reproducing the content representative signal at the desired quality in response to the status representative signal.

30. As to claim 23, The receiver of claim 22 wherein the decoder automatically reproduces the content representative signal at a lower quality in response to the status representative signal indicating that the storage device is nearly full.

31. Claims 13-16 and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsushima et al. US 6,535,717 in view of Yun US 6,700,624 further in view of Birru et al. US 2002/0181581.

32. As to claim 13, Matsushima (modified by Yun) teaches the limitations of claim 1.

Matsushima (modified by Yun) discloses robust encoding. [Matsushima - fig. 5 (7); col. 9 lines 52-57; fig. 7 (7)]

However, Matsushima (modified by Yun) does not explicitly teach wherein the encoding step comprises the step of encoding at least one of the set of encoded signals using a technique which is robust relative to the encoding of the other encoded signals.

Birru teaches wherein the encoding step comprises the step of encoding at least one of the set of encoded signals using a technique which is robust relative to the encoding of the other encoded signals. [fig. 2; fig. 4; ¶ 0018-0020; ¶ 0029-0031]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Birru with the teachings of Matsushima allowing for backward compatibility with existing receivers. [Birru - ¶ 0012]

33. As to claim 14, Matsushima (modified by Yun and Birru) wherein the at least one robust encoded signal comprises the encoded signal corresponding to the lowest quality decoded signal. [Matsushima - fig. 5 (7); col. 9 lines 45-57; fig. 7 (7); Birru - fig. 2; fig. 4; ¶ 0018-0020; ¶ 0029-0031]

34. As to claim 15, Matsushima (modified by Yun and Birru) teaches wherein the set of encoded signals are channel encoded, and the robust encoded signals are channel encoded using a channel coding technique robust relative to the channel coding technique used for the non-robust encoded signals. . [Matsushima - fig. 5 (7); col. 9 lines 45-57; fig. 7 (7); Birru - fig. 2; fig. 4; ¶ 0018-0020; ¶ 0029-0031]

35. As to claim 16, Matsushima (modified by Yun and Birru) teaches wherein the channel coding for the robust encoded signals is one of 4-VSB or 2-VSB modulation

and the channel coding for the non-robust encoded signals is 8-VSB modulation. [Birru - fig. 2; fig. 4; ¶ 0018-0020; ¶ 0029-0031]

36. As to claim 29, Matsushima (modified by Yun) teaches the limitations of claim 17. Matsushima (modified by Yun) discloses robust encoding. [fig. 5 (7); col. 9 lines 52-57; fig. 7 (7)]

Matsushima (modified by Yun) does not explicitly teach wherein at least one of the set of encoded signals is encoded using a technique which is robust relative to the encoding of the other signals, [Birru - fig. 2; fig. 4; ¶ 0018-0020; ¶ 0029-0031] and the decoder comprises a decoder, responsive to the at least one encoded signal, for decoding the at least one encoded signal. [Matsushima - fig. 5 (7); col. 9 lines 45-57; fig. 7 (7); Birru - fig. 2; fig. 4; ¶ 0018-0020; ¶ 0029-0031]

Birru teaches wherein at least one of the set of encoded signals is encoded using a technique which is robust relative to the encoding of the other signals, [Birru - fig. 2; fig. 4; ¶ 0018-0020; ¶ 0029-0031] and the decoder comprises a decoder, responsive to the at least one encoded signal, for decoding the at least one encoded signal. [Matsushima - fig. 5 (7); col. 9 lines 45-57; fig. 7 (7); Birru - fig. 2; fig. 4; ¶ 0018-0020; ¶ 0029-0031]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Birru with the teachings of Matsushima allowing for backward compatibility with existing receivers. [Birru - ¶ 0012]

37. As to claim 30, Matsushima (modified by Yun and Birru) teaches wherein the at least one robust encoded signal comprises the encoded signal corresponding to the



lowest quality decoded signal. [Matsushima - fig. 5 (7); col. 9 lines 45-57; fig. 7 (7); Birru - fig. 2; fig. 4; ¶ 0018-0020; ¶ 0029-0031]

38. As to claim 31, Matsushima (modified by Yun and Birru) teaches wherein: the set of encoded signals are channel coded, and the robust encoded signals are channel encoded using one of 4-VSB or 2-VSB modulation and the other encoded signals are channel encoded using 8-VSB modulation; [Birru - fig. 2; fig. 4; ¶ 0018-0020; ¶ 0029-0031 and the decoder comprises a demodulator for channel decoding the robust encoded signals using one of 4-VSB or 2-VSB demodulation and channel decoding the other encoded signals using 8-VSB demodulation. [Matsushima - fig. 5 (7); col. 9 lines 45-57; fig. 7 (7); Birru - fig. 2; fig. 4; ¶ 0018-0020; ¶ 0029-0031]

39. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsushima et al. US 6,535,717 in view of Yun US 6,700,624 further in view of Nakamura et al US 6,687,305.

40. As to claim 32, Matsushima (modified by Yun) teaches wherein the composite signal comprises the et of encoded signals such that a lowest quality decoded signal is undelayed, [fig. 5 (1, 2, 5b); col. 9 lines 1-19] and the other encoded signals are delayed with respect to the encoded signal corresponding to the lowest quality decoded signal such that the higher the quality of the corresponding decoded signal, the longer the delay period. [fig. 5 (1 and 4); fig. 7 (1 and 4); col. 9 lines 5-19]

Matsushima (modified by Yun) does not explicitly teach and the receiver further comprising a plurality of delay circuits, coupled between the demultiplexer and the

decoder and respectively responsive to the set of extracted encoded signals, for realigning the extracted encoded signals in time.

Nakamura teaches the receiver further comprising a plurality of delay circuits, [fig. 3 (52, 51) ; fig. 3 (52, 51, 62); fig. 5 (52, 51, 62); fig. 7 (52, 51, 62)] coupled between the demultiplexer [fig. 3 (21); fig. 5 (21); fig. 7 (21)] and the decoder [fig. 3 (63, 61); fig. 5 (61, 63); fig. 7 (61, 63)] and respectively responsive to the set of extracted encoded signals, for realigning the extracted encoded signals in time. [fig. 3; fig. 5; fig. 7; col. 7 lines 4-20; col. 8 lines 55-59]

It would obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Nakamura with the teachings of Matsushima allowing for improved signal transmission for display/reproduction.

### ***Conclusion***

41. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANNER HOLDER whose telephone number is (571)270-1549. The examiner can normally be reached on M-W, M-W 8 am-3 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anner Holder/  
Examiner, Art Unit 2621

/Tung Vo/

Primary Examiner, Art Unit 2621